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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,542

01/18/2006

Ralph Gauss

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02/02/2009

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EXAMINER

SANDERS, JAMES M

ART UNIT

PAPER NUMBER

1791

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/559,542	<b>Applicant(s)</b> GAUSS, RALPH	
	<b>Examiner</b> JAMES SANDERS	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22-36 is/are pending in the application.
- 4a) Of the above claim(s) 30-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-29 and 36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/9/06</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election of claims 22-29 and 36 in the reply filed on 12/10/08 is acknowledged.

Claims 30-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/10/08.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 22, 24-25 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Gorlich (US 6045740, already of record).

For claim 22, Gorlich teaches a method for injecting an injection molded part made of plastic, using an injection unit having a gate in a nozzle housing, the gate being connected to a flow channel which opens into a filling space in which an outer needle, and within same an inner needle for closing the gate, are guided, the outer needle first being pulled back, thereby forming a filling space, and plastic is drawn in from the flow channel and the filling space is predosed with plastic from the flow channel, during which the inner needle holds the gate closed, and at the end or after predosing, the gate

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is opened by lifting the inner needle, and the predosed plastic material is pressed through the gate into a cavity by forward motion of the outer needle, the volume of plastic inside the filling space being essentially zero at the end of the injection process, and the inner needle closes the gate at the end of the forward motion of the outer needle (Fig. 2, cl 4 lns 1-43).

For claims 24-25 and 36, Gorlich teaches the flow channel opens into the filling space, near the base thereof; the lifting motion of the inner and/or outer needle is produced by mechanical means; and a method for injecting an injection molded part made of plastic using an injection unit, the injection unit comprising a nozzle housing, a gate contained within the nozzle housing, a filling space, a flow channel in communication with the filling space for introducing plastic into the filling space, an outer needle movable to change a volume of the filling space, and an inner needle movable to control flow of plastic through the gate, the method comprising: moving the outer needle a first direction to draw plastic into the filling space from the flow channel while preventing the flow of plastic through the gate with the inner needle; moving the inner needle to open the gate; and moving the outer needle a second direction to move plastic through the gate (see above citations for claim 22).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject

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matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gorlich, and further in view of Takeda (JP 07040400, already of record).

6. Gorlich teaches the invention as discussed above.

For claim 23, Gorlich does not teach the base of the filling space runs at an angle toward the gate, and the tip of the outer needle has a corresponding design.

However, in the same field of endeavor pertaining to injection molding, Takeda teaches the base of the filling space runs at an angle toward the gate, and the tip of the outer needle has a corresponding design (Drawing 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Takeda with those of Gorlich for benefit of having the base of the filling space run at an angle toward the gate with the tip of the outer needle corresponding, to perhaps even more completely deliver the resin charge to the mold cavity.

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Gorlich does not explicitly teach additional plastic material is introduced into the filling space through at least one second, blockable flow channel; or the inner needle is pulled back and a flow channel is opened, via which melt is introduced directly into the cavity through the gate, while the inner needle continues to block the filling space; or the inner needle is pulled back further, and the passage from the filling space to the cavity is opened. However, one having ordinary skill in the art at the time the invention was made would recognize these limitations as nothing more than the duplication of parts for a multiple effect and would seek the benefit of increased molding flexibility. Please see *In re Harza*, 274 F.2d 669, 671, 124 USPQ 378, 380 (CCPA 1960) for further details.

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gorlich, and further in view of Takeda (US 5776407).

8. Gorlich teaches the invention as discussed above.

Gorlich does not teach additional plastic material is introduced into the cavity to compensate for any shrinkage by at least one further lifting motion of the outer needle. However, in the same field of endeavor pertaining to injection molding, Takeda '407 teaches topping up the mold cavity with the contraction amount of resin due to cooling (cl 1 lns 19-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Takeda '407 with those of Gorlich for the benefit of reliably producing uniform molded parts of correct dimensions. Also, although Takeda '407 uses an in-line screw type molding machine for his teaching example, it would have been obvious to one of ordinary skill in the art at the time the invention was

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made to accomplish the same objective with Gorlich's outer needle via a further lifting motion.

9. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorlich, and further in view of Gellert et al (US 6440350).

1. Gorlich teaches the invention as discussed above.

Gorlich does not explicitly teach additional plastic material is introduced into the filling space through at least one second, blockable flow channel; or the inner needle is pulled back and a flow channel is opened, via which melt is introduced directly into the cavity through the gate, while the inner needle continues to block the filling space; or the inner needle is pulled back further, and the passage from the filling space to the cavity is opened.

However, in the same field of endeavor pertaining to injection molding, Gellert et al teach additional plastic material is introduced into the filling space through at least one second, blockable flow channel; or the inner needle is pulled back and a flow channel is opened, via which melt is introduced directly into the cavity through the gate, while the inner needle continues to block the filling space; or the inner needle is pulled back further, and the passage from the filling space to the cavity is opened (Figs. 4A-C, cl 7 ln 43 – cl 8 ln 22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gellert et al with those of Gorlich for the benefit of increased molding flexibility.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES SANDERS whose telephone number is 571-270-7007. The examiner can normally be reached on Monday through Friday, 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Del Sole can be reached on 571-272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMS

/Joseph S. Del Sole/

Supervisory Patent Examiner, Art Unit 1791